Electronic Version
Stylesheet Version v1.1.1

Claims

[c1] 1. Computer program product for efficiently transferring data to a local memory of a processor, comprising:

computer code for implementing an application program;

computer code for initiating a transfer of data from an external memory to a processor by invoking a transfer subroutine operable on said processor;

computer code for executing a portion of said application program;

computer code for determining that said data has been transferred from said external memory utilizing a proportional relationship between said application program speed and said transfer of data speed; and

computer readable medium for storing the code.

[c2] 2. Computer program product of claim 1, wherein said computer code for determining that said data has been transferred comprises:

computer code for determining how much code of said application program has been executed.

[c3] 3. Computer program product of claim 1, further comprising:

computer code for checking a semaphore for said data transfer to confirm that said transfer is complete.

[c4] 4. An apparatus for efficiently transferring data to a local memory of a processor, comprising:

means for implementing an application program;

means for initiating a transfer of data from an external memory to a processor by invoking a transfer subroutine operable on said processor;

means for executing a portion of said application program; and

means for determining that said data has been transferred from said external memory utilizing a proportional relationship between said application program speed and said transfer of data speed.

[c5] 5. The apparatus of claim 4, wherein said determining that said data has been transferred comprises:

means for determining how much code of said application program has been executed.

[c6] 6. The apparatus of claim 4, further comprising:

means for checking a semaphore for said data transfer to confirm that said transfer is complete.

[c7] 7. A consumer electronic device arranged to process

suitably configured audio and/or video data, comprising:

a memory unit arranged to store segmented program code corresponding to an application program; and

a processor unit coupled to the memory unit having a number of interconnected components that include,

a central processing unit (CPU) arranged to execute the program code,

a plurality of local memory blocks wherein at least one local memory block is utilized for loading program code and support code and wherein at least another one of the local memory blocks includes a portion for storing data, and

a number of tracking queues each of which includes a queue entry used to coordinate loading of selected ones of the plurality of local memory blocks with program code associated with a selected algorithm,

wherein when CPU executes the application program, at least one of said tracking queues is initialized to include a pointer to each of said segments,

said CPU initiates a transfer of data from said memory unit, and

said CPU then executes an associated portion of said application program and determines that said data has been transferred from said external memory utilizing a proportional relationship between said application program and said transfer of data speed.

[c8] 8. A device as recited in claim 7, wherein the local memory blocks further comprise a number of local memory slots.

[c9] 9. A device as recited in claim 8, wherein the processor further comprises:

a semaphore register block used to store a semaphore arranged to keep track of a state of selected local memory slots.

[c10] 10. A device as recited in claim 7, wherein the electronic device is a DVD player.

[c11] 11. A device as recited in claim 7 wherein the application programs include a Discrete Cosine Transform (DCT), an AC-3 routine, a Fast Fourier Transform (FFT), and an Echo special effects program.